

WHAT IS CLAIMED IS:

1. A method of manufacturing an ink jet printer head, comprising the step of ejecting an ink by pressurizing an ink pressure chamber by means of a piezo-electric element deforming in response to an electric signal, provided on a head base forming said ink pressure chamber; wherein:

a manufacturing method of said head base comprises a first step of manufacturing a green sheet having a prescribed relief pattern in response to said head base; a second step of forming said head base by coating and solidifying a material for forming said head base on the surface of said green sheet having said relief pattern; a third step of stripping off said head base from said green sheet; and a fourth step of forming a nozzle port for discharging the ink on said head base.

2. A method of manufacturing an ink jet printer head according to claim 1, wherein:

said first step comprises a step of forming a resist layer in response to a prescribed pattern on a substrate of green sheet, and then manufacturing said green sheet by forming said relief pattern on said substrate of green sheet by etching.

3. A method of manufacturing an ink jet printer head according to claim 2, wherein:

said substrate of green sheet is a silicon wafer.

4. A method of manufacturing an ink jet printer head according to claim 2, wherein:

said substrate of green sheet is made of quartz glass.

5. A method of manufacturing an ink jet printer head according to claim 1, wherein:

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 5 ~~said first step comprises the steps of forming a resist layer in response to a prescribed pattern on a second green sheet, then converting said second green sheet and said resist layer into conductors, forming a metal layer by electrically depositing a metal by electroplating method, and then, stripping off said metal layer from said second green sheet and said resist layer to manufacture said green sheet.~~

6. A method of manufacturing an ink jet printer head according to claim 1, wherein:

10 the material for forming said head base is a substance hardenable by imparting energy.

7. A method of manufacturing an ink jet printer head according to claim 6, wherein:

said energy is a light or a heat, or both a light and a heat.

15 8. A method of manufacturing an ink jet printer head according to claim 1, wherein:

said head base is formed of a thermoplastic substance.

9. A method of manufacturing an ink jet printer head according to claim 8, wherein:

said thermoplastic substance is hydrated glass.

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 20 10. A method of manufacturing an ink jet printer head according to claim 1, wherein:

~~the recess of said relief pattern formed on said green sheet has a tapered shape having an opening larger than a bottom.~~

25 11. A method of manufacturing an ink jet printer head according to claim 1, wherein:

a stripping layer of a material having a low adhesion to said head base is formed on said green sheet surface having said relief pattern.

12. A method of manufacturing an ink jet printer head according to claim 1, wherein:

5 in said third step, said head base is stripped off from said green sheet by irradiating a light onto an interface between said green sheet and the head base.

13. A method of manufacturing an ink jet printer head according to claim 12, wherein:

10 said head base is stripped off from said green sheet in the interior of a separating layer and/or at an interface with said green sheet by providing said separating layer between said green sheet and said head base, and irradiating said light onto the interface between said green sheet and the separating layer.

14. A method of manufacturing an ink jet printer head according to claim 1, wherein:

15 said fourth step comprises forming said ink discharging nozzle port by the lithographic method.

15. A method of manufacturing an ink jet printer head according to claim 1, wherein:

20 said fourth step comprises forming said ink discharging nozzle port by means of a laser beam.

16. A method of manufacturing an ink jet printer head according to claim 1, wherein:

said fourth step comprises forming said ink discharging nozzle port by means of a converging ion beam.

25 17. A method of manufacturing an ink jet printer head according to claim 1, wherein:

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~~said fourth step comprises forming said ink discharging nozzle port by discharge fabrication.~~

18. An ink jet printer head manufactured by the manufacturing method of an ink jet printer head according to any one of claims 1 to 17.